

Subadditivity Inequalities for Compact Operators

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Abstract.

Some subadditivity inequalities for matrices and concave functions also hold for Hilbert space operators, but (unfortunately!) with an additional ε term. It seems not possible to erase this residual term. However, in case of compact operators we show that the ε term is unnecessary. Further, these inequalities are strict in a certain sense when some natural assumptions are satisfied. The discussion also stresses on matrices and their compressions and several open questions or conjectures are considered, both in the matrix and operator settings.